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**ON THE PRESENCE OF *EUMUNIDA BELLA*
(CRUSTACEA: ANOMURA: CHIROSTYLIDAE)
OFF THE CANARY AND CAPE VERDE ISLANDS
(NORTHEASTERN ATLANTIC)**

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With 1 figure

ABSTRACT. Five specimens of *Eumunida bella* ranging from 6 to 39 mm carapace length (CL) were collected off Gran Canaria, which confirms the presence of this species off the Canary Islands, the northernmost distribution limit of the species known to date. One additional 15.5 mm CL specimen was caught off Santiago, also confirming the occurrence of this poorly known species off the Cape Verde Islands. The present material was collected with both benthic and semifloating traps.

KEY WORDS: *Eumunida bella*, Chirostylidae, Canary Islands, Cape Verde Islands.

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RESUMO. Cinco espécimes de *Eumunida bella* (CL = 6-39 mm) foram colhidos ao largo da ilha de Gran Canaria, o que confirma a presença desta espécie nas ilhas Canárias, o limite mais ao Norte da sua área de distribuição. Um exemplar adicional (CL = 15.5 mm) foi colhido ao largo da ilha de Santiago, arquipélago de Cabo Verde, confirmando também a presença desta espécie pouco conhecida naquelas águas. Todo o material foi colhido com covos bentônicos e semi-flutuantes.

INTRODUCTION

The squat lobsters of the world have been recently catalogued by BABA *et al.* (2008), being arranged in three sister families: Chirostylidae, Galatheidae and Kiwaidae (Crustacea: Decapoda: Anomura).

The deep-water squat lobsters of the family Chirostylidae Ortmann, 1892 are known from relatively few studies (HENDERSON, 1885, 1888; HAIG, 1974; BABA, 1986, 1988, 1989, 2000; DE SAINT LAURENT & MACPHERSON, 1990a, b; DE SAINT LAURENT & POUPIN, 1996; AHYONG & BABA, 2004; AHYONG & POORE, 2004; BABA *et al.*, 2008).

Chirostylids are diverse (192 known species to date) and comprise seven valid genera: *Chirostylus* Ortmann, 1892 (6 species); *Eumunida* Smith, 1883 (28 species); *Gastroptychus* Caurelly, 1896 (21 species); *Hapaloptyx* Stebbing, 1920 (1 species); *Pseudomunida* Haig, 1979 (1 species); *Uroptychodes* Baba, 2004 (11 species); and *Uroptychus* Baba, 1988 (124 species) (BABA, 2004; BABA *et al.*, 2008). Chirostylids are typically deep-water animals from the continental slope or abyssal depths and are often associated with anthozoans such as antipatharians, alcyonaceans and gorgonaceans (BABA *et al.*, 2008).

Chirostylids of the genus *Eumunida* Smith are known from relatively few specimens including twenty-eight recently described or poorly known species, twenty-five of which have been described from both eastern and western Indian Ocean, Indo-West Pacific and both eastern and western Pacific Ocean (BABA, 1990; DE SAINT LAURENT & MACPHERSON, 1990a, b; DE SAINT LAURENT & POUPIN, 1996; AHYONG & BABA, 2004). According to DE SAINT LAURENT & MACPHERSON (1990a), the remaining three species have been recorded from the Atlantic Ocean: *Eumunida squamifera* de Saint Laurent and Macpherson, 1990 from the southwest Atlantic (Namibia), and the closely related species *Eumunida picta* Smith, 1883 from the western Atlantic (Nova Scotia to the Caribbean and Colombia) and *Eumunida bella* de Saint Laurent and Macpherson, 1990 from the northwest Africa.

Following a series of deep-water surveys off the Canary and Cape Verde Islands, new findings of *Eumunida bella* have been done and data on them gathered.

MATERIAL AND METHODS

A series of surveys of the benthic and epibenthic fauna on board of the R/V Pixape II were done: off the Canary Islands (2003-2007) between 120 m and 2,600 m of depth, and off the Cape Verde Islands (2003 and 2005) between 100 and 1,000 m.

The following fishing gear was used: bottom traps (BT) (GONZÁLEZ *et al.*, 1988) and semifloating shrimp traps (SFST, operated around 3 m above the seafloor) (GONZÁLEZ *et al.*, 1992). In average, BT and SFST were deployed for 15-25 hours.

All measurements are in mm and follow de Saint Laurent and Macpherson (1990). CL – carapace length; CW – carapace width.

Specimens were deposited in the reference collections of the Instituto Canario de Ciencias Marinas (ICCM).

RESULTS

Material examined

Canary Islands: 3 females, ICCM-0099, 19.0 mm CL, 20.0 mm CW, ICCM-0100, 17.5 mm CL, 18.5 mm CW, and ICCM-0101, 14.0 mm CL, 15.0 mm CW, Arguineguín, SW Gran Canaria, 27° 41' N 15° 46' W, cruise Pandcan-2, 563 m, 08 Feb 2004, sta. 20, BT (on the outside of the trap); 1 female, ICCM-0103, 39.0 mm CL, 41.5 mm CW, Arguineguín, SW Gran Canaria, 27° 39' N 15° 43' W, cruise Pandcan-3, 490 m, 17 Jun 2004, sta. 14, BT; 1 female, ICCM-0102, 6.0 mm CL, 5.0 mm CW, Arguineguín, SW Gran Canaria, 27° 40' N 15° 45' W, cruise Pandcan-3, 489 m, 17 Jun 2004, sta. 15, SFST. Cape Verde Islands: 1 female, ICCM-0317, 15.5 mm CL, 16.0 mm CW, Ponta Covinha, SW Santiago, 15° 02' N 23° 46' W, cruise Cabo Verde 2005-06, 525-630 m, 15 Jun 2005, sta. 208, BT.

DISCUSSION

Eumunida bella is a deep-water species inhabiting in the East Atlantic Ocean at least from 28° 41' N to 03° 02' S (MILNE EDWARDS & BOUVIER, 1894, 1900; GORDON, 1930; DE SAINT LAURENT & MACPHERSON, 1990a; BABA *et al.*, 2008).

In the Canary Islands it was known from only two specimens collected from off Tenerife, at 466-540 m of depth (GORDON, 1930; DE SAINT LAURENT & MACPHERSON, 1990a), and from the Cape Verdes, it was known from two other specimens from off Praia, island of Santiago, trawled during the “Talisman” expedition in 1893, at 277-150 m of depth (MILNE EDWARDS & BOUVIER, 1900). At that time those specimens were identified as *E. picta* Smith, 1883 and later transferred to *E. bella* by DE SAINT LAURENT & MACPHERSON (1990a).

The five Canary Islands specimens reported in the present study were collected within the range of the previous records, although from a different island, but the specimen

from the Cape Verdes was taken further deep, indicating that this species ranges at least from ca. 150 m down to ca. 630 m in that area. Furthermore, according to DE SAINT LAURENT & MACPHERSON (1990a), the specimen from Cape Verde recorded by MILNE EDWARDS & BOUVIER (1900) was not found, therefore the present specimen (Fig. 1) remains the proof of the existence of this species in that archipelago.

This species seems uncommon as is known in the eastern Atlantic Ocean from scattered locations from the Canary Islands, Cape Bojador (Western Sahara), Senegal, Cape Verde Islands and south of Gabon (DE SAINT LAURENT & MACPHERSON, 1990a; BABA *et al.*, 2008).

The six specimens now collected ranged in size from 6.0 mm CL, 5.0 mm CW to 39.0 mm CL, 41.5 mm CW. All females were non-ovigerous.



Fig. 1 - Female of *Eumunida bella*, from Cape Verde Islands (ICCM-0317), 15.5 mm CL, 16.0 mm CW.

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No. 9

NOTES ON TWO MADEIRA PLANTS

By N. C. H. KRAUSS ¹

The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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